APPLICATION NO.	FILING DATE	. FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,823	12/11/2003	Kelly Cameron	51318/RJP/B600	2171

23363	7590	06/08/2005

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EXAMINER
TORRES, JOSEPH D

ART UNIT	PAPER NUMBER
2133	

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

<table>
<tr><td rowspan="3">Office Action Summary</td><td>Application No.</td><td colspan="2">Applicant(s)</td></tr>
<tr><td>10/733,823</td><td colspan="2">CAMERON, KELLY</td></tr>
<tr><td>Examiner</td><td>Art Unit</td><td></td></tr>
<tr><td></td><td>Joseph D. Torres</td><td>2133</td><td></td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _1_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 September 2004</u>.

2a)☐ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>2-17</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) <u>2-17</u> are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I.   Claims 2-6, drawn to A method for correcting an algebraic-coded message comprising determining the existence of errors using inversionless calculations on a syndrome polynomial of the algebraic-coded message that includes redundancies usable to determine an existence of errors, a location and magnitude of errors and discrepancy values and if the existence of errors has been determined, determining the location and magnitude of the errors and the discrepancy values using inversionless calculations, classified in class 714, subclass 782.

II.   Claims 7-12, drawn to An apparatus for correcting an algebraic-coded message comprising: a syndrome polynomial receiver receiving an uncorrected syndrome polynomial of the algebraic-coded message that includes redundancies usable to determine an existence of errors, a location and magnitude of errors and discrepancy values; a plurality of polynomial storage devices being adapted to store polynomials; a plurality of discrepancy value storage devices being adapted to store discrepancy values; a syndrome polynomial producer being adapted to produce a corrected syndrome polynomial of the algebraic coded message; one or more arithmetic-logic components, operably connected to the polynomial

storage devices, the discrepancy value storage devices, the syndrome polynomial receiver, and the syndrome polynomial producer; and an inversionless calculator, operably connected to the polynomial storage devices, the discrepancy value storage devices, the syndrome polynomial receiver, the syndrome polynomial producer, and the arithmetic-logic components, wherein the inversionless calculator corrects errors in the uncorrected syndrome polynomial, resulting in a corrected syndrome polynomial, using inversionless calculations and using the polynomial storage devices to store different states of progress of the inversionless calculations and the discrepancy value storage devices to store discrepancy values discovered in the uncorrected syndrome polynomial, and wherein the inversionless calculator produces the corrected syndrome polynomial using the syndrome polynomial producer, classified in class 714, subclass 785.

III.   Claims 13-17, drawn to A computer program product recorded on a computer readable medium for correcting an, algebraic-coded message, comprising computer readable program code with a software interface for receiving an uncorrected syndrome polynomial data structure of the algebraic-coded message and computer readable program code determining the existence of errors, the location and magnitude of errors and the discrepancy values in the uncorrected syndrome polynomial data

structure using inversionless calculations, classified in class 714, subclass
780.

The inventions are distinct, each from the other because of the following reasons:

Inventions Group I and Group II are related as process and apparatus for its
practice. The inventions are distinct if it can be shown that either: (1) the process as
claimed can be practiced by another materially different apparatus or by hand, or (2) the
apparatus as claimed can be used to practice another and materially different process.
(MPEP § 806.05(e)). In this case, the process can be practiced in software.

Inventions Group I and Group III are related as subcombinations disclosed as
usable together in a single combination. The subcombinations are distinct from each
other if they are shown to be separately usable. In the instant case, invention Group I
has separate utility such as for determining the existence of errors using inversionless
calculations on a syndrome polynomial of the algebraic-coded message that includes
redundancies usable to determine an existence of errors, a location and magnitude of
errors and discrepancy values and if the existence of errors has been determined,
determining the location and magnitude of the errors and the discrepancy values using
inversionless calculations. In the instant case, invention Group III has separate utility
such as for a computer program product recorded on a computer readable medium for
correcting an, algebraic-coded message, comprising computer readable program code
with a software interface for receiving an uncorrected syndrome polynomial data
structure of the algebraic-coded message and computer readable program code
determining the existence of errors, the location and magnitude of errors and the

discrepancy values in the uncorrected syndrome polynomial data structure using inversionless calculations. See MPEP § 806.05(d).

Inventions Group II and Group III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions Group II is a hardware implementation whereas Group III is a software implementation.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Groups I to III are mutually exclusive, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

A telephone call was made to Richard J. Paciulan on 5/23/2005 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joseph D. Torres, PhD
Primary Examiner
Art Unit 2133